

## ANNOUNCEMENT OF FEDERAL FUNDING OPPORTUNITY

### EXECUTIVE SUMMARY

**Federal Agency Name(s):** Office of the Under Secretary (USEC), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce

**Funding Opportunity Title:** Environmental Literacy Grants for Informal/Nonformal Science Education

**Announcement Type:** Initial

**Funding Opportunity Number:** NOAA-SEC-OED-2010-2002248

**Catalog of Federal Domestic Assistance (CFDA) Number:** 11.008, NOAA Mission-Related Education Awards

**Dates:** The deadline for letters of intent is 5:00 PM EST February 16, 2010. The deadline for applications is 5:00 PM EDT on April 6, 2010. Applications submitted through Grants.gov are automatically date/time stamped when they are validated and submitted to the Agency. Hard copy applications must be provided to an expedited shipping service by the deadline and proof of this must be provided by the applicant. **PLEASE NOTE:** When submitting through Grants.gov, you will receive 2 emails. An initial email will be sent to confirm your attempt to submit a proposal. This is NOT a confirmation of acceptance of your application. It may take Grants.gov up to two (2) business days to validate or reject the application and send you a second email. Please keep this in mind in developing your submission timeline.

An informational teleconference with the program officers will occur on January 21st 2010 (time TBD). Interested applicants should register by contacting [oed.grants@noaa.gov](mailto:oed.grants@noaa.gov) and include in the Subject line of the email: "Interested in FFO Teleconference - Need Details" and provide the interested parties name, institution and telephone number in the body of the email. Whenever possible people from the same institution should try to call in through the same phone line.

**Funding Opportunity Description:** The goal of this funding opportunity is to support projects that engage the public in educational activities that utilize emerging and/or advanced technologies and leverage NOAA assets to improve understanding, and stewardship of the local and global environment. There is specific interest in projects that use emerging and/or advanced technologies to (1) facilitate outdoor experiences involving scientific inquiry and exploration of the natural world apart from formal K-12 curricula and (2) visualize, display, and interpret data to improve understanding and provide a systems perspective of Earth's dynamic processes. This program has two priorities. Priority 1 is for large-scale projects that occur over a longer duration with regional to national implementation. Priority 2 is for small-scale projects that occur over

shorter duration with local to regional implementation. Funded projects will be between one and five years in duration. This FFO meets NOAA's Mission Support goal to provide critical support for NOAA's mission. It is anticipated that awards under this announcement will be made by September 30, 2010 and that projects funded under this announcement will have a start date no earlier than October 1, 2010. Note: a PDF version of this announcement is available at [http://www.oesd.noaa.gov/funding\\_opps.html](http://www.oesd.noaa.gov/funding_opps.html)

## FULL ANNOUNCEMENT TEXT

### I. Funding Opportunity Description

#### A. Program Objective

##### 1. Overview:

The National Oceanic and Atmospheric Administration (NOAA) provides support to improve environmental literacy among our Nation's citizens and promote a diverse workforce in ocean, coastal, Great Lakes, weather, and climate sciences in order to encourage stewardship and increase informed decision making for the Nation. NOAA defines an environmentally literate person as someone who has a fundamental understanding of the systems of the natural world, the relationships and interactions between the living and non-living environment, and the ability to understand and utilize scientific evidence to make informed decisions regarding environmental issues. Improving environmental literacy and the public's understanding of how our Nation's natural resources are managed and the importance of these resources is critical to meeting the Agency's stewardship mission. To address this mission, NOAA engages in informal/nonformal science education activities at local, state, regional, and national levels, with particular emphasis on reaching communities that are underrepresented and underserved in Science, Technology, Engineering and Mathematics (STEM) fields. The Environmental Literacy Grants Program supports Goal 1 of NOAA's 2009-2029 Education Strategic Plan (<http://www.education.noaa.gov/plan>), specifically focusing on:

- Outcome 1.2: Educators understand and use environmental literacy principles.
- Outcome 1.3: Educators, students, and/or the public collect and use ocean, coastal, Great Lakes, weather, and climate data in inquiry and evidence-based activities.
- Outcome 1.4: Lifelong learners are provided with informal science education opportunities focused on ocean, coastal, Great Lakes, weather, and climate topics.

This funding opportunity also supports the President's Educate to Innovate campaign (<http://www.whitehouse.gov/issues/education/educate-innovate>).

The goal of this funding opportunity is to support projects that engage the public in educational activities that utilize emerging and/or advanced technologies and leverage NOAA assets\* to improve understanding, and stewardship of the local and global environment. There is specific interest in projects that use emerging and/or advanced technologies to (1) facilitate outdoor experiences involving scientific inquiry and exploration of the natural world apart from formal K-12 curricula and (2) visualize, display, and interpret data to improve understanding and provide a systems perspective of Earth's dynamic

processes.

This funding opportunity emphasizes the use of emerging and advanced technologies in the area of informal/nonformal science education. Applicants are encouraged to make use of Web 2.0 technology: web applications which enable interactivity, information sharing and collaboration. Examples include web-based communities, social-networking sites, and blogs. Also, of interest are projects that employ innovative use of hand-held devices for educational purposes, such as GPS or custom applications for mobile devices, as well as projects incorporating live video and data feeds using telepresence technology. The use of cutting-edge technology for data visualization, such as advanced/high performance computing, GIS, and advanced and/or innovative display systems, such as spherical display systems\*\*, is also encouraged. Projects involving cyberlearning - teaching and learning interactions conducted through the use of these and other technologies - are appropriate for this announcement.

*[\* NOAA assets are tangible resources that the Agency makes available to support work done through the Environmental Literacy Grants program. NOAA can provide unique resources in ocean, coastal, Great Lakes, weather and climate sciences such as data sets, subject matter experts, facilities, and managed natural resource areas. Examples of these assets include, but are not limited to: the National Estuarine Research Reserve System, National Marine Sanctuary System, National Sea Grant College Program, National Weather Service Field Offices, National Marine Fisheries Service's science centers and regional offices, NOAA Climate Program Office, NOAA National Data Centers, NOAA Office of Ocean Exploration and Research, NOAA Cooperative Institutes, and Regional Associations of the Integrated Ocean Observing System. Information about NOAA's assets can be found at: [http://www.oesd.noaa.gov/elg/NOAA\\_assets.html](http://www.oesd.noaa.gov/elg/NOAA_assets.html) . Additionally a summary of NOAA programs and activities sorted by the state or territory in which they are based or focused is available at: <http://www.legislative.noaa.gov/NIYS0107/noaainyourstate.html>]*

*[\*\* Spherical display systems are sphere-shaped "screens" onto which global data and other imagery can be shown. The displays typically range in diameter from 18 inches to 6 feet. One example is NOAA's Science On a Sphere (SOS), which consists of a 68-inch diameter opaque sphere onto which 4 video projectors project seamless "movies" of animated Earth system dynamics (<http://www.sos.noaa.gov/>). Other examples of convex spherical display systems include, but are not limited to, Magic Planet (<http://www.globalimagination.com/>), and OmniGlobe (<http://www.arcscience.com/omni.htm>).]*

All projects must focus on one or more of the following informal/nonformal science education activities:

- Technologically facilitated outdoor experiential learning for youth and adults: Projects involving this activity will use emerging and/or advanced technologies to encourage

greater participation in, exploration of, and understanding of outdoor environments apart from formal K-12 curricula.

- Public participation in science related to one or more of NOAA's mission goals: Projects involving this activity will use emerging and/or advanced technologies to engage new audiences in scientific research collaborations with scientists and/or enhance individual and group participation in scientific research projects.
- Exhibitions and online programs allowing the visualization and exploration of data supporting the interpretation of ocean, coastal, Great Lakes, weather and climate sciences in informal/nonformal learning settings for public audiences. If global visualization activities are planned see Section I.A.4 for additional information.
- Spherical display system programming that facilitates public audiences' interaction and learning with spheres (including spherical content development and integration with other visualization systems), informal/nonformal science education professional development/training programs, installations for integration into public exhibits with an Earth system science theme, and advanced evaluation efforts. There are several special requirements that apply to projects that include a spherical display component. See Section I.A.4 below for additional details.
- Professional development and training programs for informal/nonformal education staff and volunteer interpreters related to any of these activities.

**PLEASE NOTE:** This program does not support the development of films, television and radio programs. Permanent and traveling exhibitions will only be considered if they feature spherical display systems or data visualizations as described above.

Applications that propose the expansion or enhancement of an existing project through activities described in the above paragraphs are eligible. Applicants are also encouraged to leverage the work of projects previously funded by NOAA's Environmental Literacy Grants. A list of previously funded projects is available at [http://www.oesd.noaa.gov/elg/elg\\_projects.html](http://www.oesd.noaa.gov/elg/elg_projects.html).

This funding opportunity is focused on informal/nonformal science learning. Please be aware, there are other funding opportunities that may be a more appropriate source of support for your project. The NOAA Office of Education offers the Environmental Literacy Grant (ELG) program yearly, with the emphasis of each funding announcement alternating between informal/non-formal education and formal K-12 education. The next ELG funding announcement will likely be focused on formal K-12 education and should be issued in June 2010 with awards resulting from that announcement funded in FY2011. Any projects with activities focusing on K-12 students and their teachers and with strong linkages to the school curriculum should be submitted to the June funding opportunity. NOAA also offers K-12

education-related granting opportunities through the Bay Watershed Education and Training (B-WET) program, which provides funding to six specific regions: California, Chesapeake Bay, Gulf of Mexico, Hawaii, New England, and Pacific Northwest. The B-WET funding opportunities emphasize experiential learning in a watershed setting and highlight regional priorities. Any applications focusing on B-WET program goals in these regions will not be considered under this Federal Funding Opportunity or other ELG funding announcements and should be submitted in response to the relevant regional federal funding opportunity (announcement dates vary by region). Please refer to the B-WET website (<http://www.oesd.noaa.gov/BWET/>) for further information.

In conjunction with this funding opportunity, the National Science Foundation also offers funding for projects focusing on climate change education through a variety of the Foundation's Education and Human Resources (EHR) programs. Desired areas of emphasis were detailed in the Foundation's Dear Colleague Letter #09-058 (<http://www.nsf.gov/pubs/2009/nsf09058/nsf09058.jsp>). That letter announced augmented funding for the relevant EHR programs in FY 2009; it is anticipated that this letter will be followed by a multi-directorate initiative in FY 2010, contingent on the availability of funds.

Successful projects under this funding opportunity will exhibit as many of the following characteristics as is relevant and/or feasible:

- Increasing public understanding and appreciation of the interconnectedness of people and the environment, especially with reference to climate change;
- Aligning activities to the principles in "Climate Literacy: The Essential Principles of Climate Science" (<http://www.noaa.gov/climateliteracy.html>) and "Ocean Literacy: Essential Principles of Ocean Sciences" ([http://www.coexploration.org/oceanliteracy/documents/OceanLitConcepts\\_10.11.05.pdf](http://www.coexploration.org/oceanliteracy/documents/OceanLitConcepts_10.11.05.pdf));
- Involving collaborations/partnerships with other institutions/organizations and/or networks of institutions/organizations. Partnerships with science institutions that will be able to provide scientific knowledge and expertise to inform the development of exhibitions and/or program content are strongly encouraged. Partnerships with NOAA programs and personnel to ensure that NOAA assets are leveraged in the execution of project activities are also strongly encouraged whenever possible;
- Providing a comprehensive learning experience that extends beyond a single visit to an informal/nonformal science education institution or outdoor environment or the simple acquisition of knowledge;

- Assisting participants in increasing their stewardship behaviors;
- Employing the strategies of the Citizen Science Tool Kit (see <http://www.citizen science.org>);
- Engaging members of populations traditionally underrepresented and underserved in STEM fields and providing appropriate cultural contexts for their learning and strategies to support their participation;
- Addressing, as appropriate, recent findings of the Ocean Project's 2009 public literacy survey (<http://www.theoceanproject.org/resources/opinion.php>);
- Being based on needs assessment and having clearly stated outcomes and objectives that are measurable and appropriate to the target audience(s) (see Evaluation below for further guidance);
- Sharing information on project impacts and design with NOAA and the broader environmental education community; and/or
- Basing project's approach on established best practices. In particular, the four key recommendations in the National Research Council report on "Learning Science in Informal Environments: People, Places, and Pursuits" (Bell, *et al.*, 2009), excerpted below, incorporate such practices and should be utilized as appropriate:
  - Recommendation 1: Exhibit and program designers should create informal environments for science learning according to the following principles. Informal environments should:
    - Be designed with specific learning goals in mind (e.g., the strands of science learning).
    - Be interactive.
    - Provide multiple ways for learners to engage with concepts, practices, and phenomena within a particular setting.
    - Facilitate science learning across multiple settings.
    - Prompt and support participants to interpret their learning experiences in light of relevant prior knowledge, experiences, and interests.
    - Support and encourage learners to extend their learning over time.
  - Recommendation 2: From their inception, informal environments for science learning should be developed through community-educator partnerships and

whenever possible should be rooted in scientific problems and ideas that are consequential for community members.

- Recommendation 3: Educational tools and materials should be developed through iterative processes involving learners, educators, designers, and experts in science, including the sciences of human learning and development.
- Recommendation 4: Front-line staff should actively integrate questions, everyday language, ideas, concerns, worldviews, and histories, both their own and those of diverse learners. To do so they will need support opportunities to develop cultural competence, and to learn with and about the groups they want to serve.

## **2. Target Audiences:**

- Public audiences: including youth, families, adult learners, and community groups; and
- Professional audiences: informal/nonformal education professionals and volunteer interpreters.

Activities should be designed to address a particular audience in an informal/nonformal learning setting. NOAA is supportive of informal/nonformal science education projects that complement formal K-16 education. However, projects funded through this opportunity shall focus on activities that will occur outside of school and are not linked to school curricula.

## **3. Project Evaluation:**

Project activities should be evaluated for their effectiveness in meeting proposed project goals and objectives as well as the goal of the program, which is to engage the public in educational activities that utilize emerging and/or advanced technologies and leverage NOAA assets to improve understanding and stewardship of the local and global environment. Projects should be based on an existing front-end evaluation/needs assessment and there should be some discussion in the project description of that needs assessment. Plans for formative and summative project evaluations should be well constructed and specific to the project type (see "Framework for Evaluating Impacts of Informal Science Education Projects" at [http://caise.insci.org/resources/Eval\\_Framework.pdf](http://caise.insci.org/resources/Eval_Framework.pdf)). For example, projects involving the design of new or modification of existing digital interactive media should consider evaluating the interface design as well as the educational impacts of the proposed project. Discussion of front-end, formative and summative evaluations should be included in both the project description and budget sections. Lastly, potential impact of the project beyond the award period should also be described.



Overall, project evaluation should be handled by external professional evaluators or by internal staff who have significant experience with evaluation and are not otherwise substantively involved with the project. Additionally, some projects may require specialized evaluation expertise, for example, in the evaluation of the interface of digital interactive media. Project evaluation should include assessment of changes in the target audiences' attitudes, knowledge, awareness, and/or behaviors as a result of the activities undertaken.

**PLEASE NOTE:** projects involving spherical display systems should refer to additional specialized evaluation guidance found in Section I.A.4 of this funding opportunity.

Principal Investigators should consider sharing evaluation results and project impacts through presentations and peer-reviewed publications of relevant professional organizations such as the American Geophysical Union (AGU), American Meteorological Society (AMS), Association of Zoos and Aquariums (AZA), Association of Science Technology Centers (ASTC), North American Association of Environmental Education (NAAEE), National Marine Educators Association (NMEA), etc. Also, summative evaluation reports should be posted to <http://www.informalscience.org> to further inform the broad field of informal science education about what was learned from the project.

#### **4. Additional Information Pertinent to Projects Related to Spherical Display Systems:**

##### **a. Spherical Display Activities**

NOAA has previously supported the integration of spherical display systems in public exhibits at informal/nonformal education venues with the goals of (1) improving the understanding of spherical display systems as an effective Earth system science learning tool, and (2) building environmental literacy among the general public through increased use of NOAA data and NOAA-related data and data products in informal/nonformal education institutions. Details of this previous support are available in the FAQ section for this funding opportunity at: [http://www.oesd.noaa.gov/elg/elg\\_faqs.html](http://www.oesd.noaa.gov/elg/elg_faqs.html).

A key component of NOAA's support for the use of spherical display systems in public exhibits is the Science On a Sphere (SOS) Users Collaborative Network (Network, <http://www.oesd.noaa.gov/network/>). Members of the Network are those institutions that have received funding from NOAA related to spherical display systems or have purchased NOAA's SOS system to display in a public education setting. NOAA supports the Network to aid in informing investment and development decisions related to the SOS system and to provide a mechanism for member institutions to work together to maximize the effectiveness of SOS as an Earth system science education platform. NOAA supports workshops and meetings of the Network to discuss the SOS system and software, creation and cataloging of content, related exhibitions, new methods for delivering content via SOS, and many other

issues relevant to this effort. All projects focused on spherical display systems should be responsive to the findings of the Network as articulated in the report from the most recent Network workshop available at: [http://www.oesd.noaa.gov/network/Workshop\\_rpt\\_2009/](http://www.oesd.noaa.gov/network/Workshop_rpt_2009/). Also, all project outcomes, lessons learned, and products, such as, sphere content, interactives, docent programs, etc. should be shared, freely with Network members. Awardees should plan to participate in at least one Network workshop and request funding to cover travel to the workshop(s) (base travel estimates on yearly three-day workshops within the continental United States).

This funding opportunity aims to continue to grow the Network by supporting programming that facilitates interaction and learning with spheres (including spherical content development), informal education professional development/training programs (e.g., docent/interpreter training programs for the sphere exhibitions), installations of spherical display systems for integration into public exhibits with an Earth system science theme, integration with other visualization systems, and advanced evaluation efforts.

It is required that all spherical display system projects, other than those focused on a new installation, involve at least one institution currently displaying SOS (on public exhibit) that is a member of the SOS Users Collaborative Network. A list of such institutions is available at: [http://www.oesd.noaa.gov/network/Member\\_list.html](http://www.oesd.noaa.gov/network/Member_list.html). This institution(s) should be involved in project development and implementation. It is expected that this institution(s) will receive a portion of the project funds to compensate them for their efforts in the project.

For spherical display system projects, project evaluation should include assessment of changes in participant's attitudes, knowledge, awareness, and/or behaviors as a result of viewing the spherical display system and the Earth system science content shown. Applicants are strongly advised to review the evaluation reports pertaining to spherical display systems that have been shared by the Network available at: [http://www.oesd.noaa.gov/network/SOS\\_evals/](http://www.oesd.noaa.gov/network/SOS_evals/). Project evaluations should build upon the body of knowledge represented in these reports.

Due to the technical nature of projects involving spherical display systems or any related activity, it is required that applicants planning to submit an application that contains an activity related to a spherical display must discuss their project, prior to submission, with one of two program officers: Carrie McDougall at [carrie.mcdougall@noaa.gov](mailto:carrie.mcdougall@noaa.gov) or 202-482-0875 or John McLaughlin at [john.mclaughlin@noaa.gov](mailto:john.mclaughlin@noaa.gov) or 202-482-2893.

#### **b. Programming for Spheres**

Support is available for the development of programs that facilitate learning with spherical display systems which can include the development, testing and implementation of interactives, development and evaluation of Earth system science content for spherical

display systems, and other sphere-related programming. The need for any spherical programming should be well documented and based on the recommendations of the Science On a Sphere Users Collaborative Network as articulated in the report from the most recent Network workshop available at: [http://www.oesd.noaa.gov/network/Workshop\\_rpt\\_2009/](http://www.oesd.noaa.gov/network/Workshop_rpt_2009/). Content and other programs deemed educationally effective should be developed utilizing the results of relevant research and assessed for efficacy using appropriate evaluation methods. Due to the investment NOAA has already made in Science On a Sphere (SOS), content and programming for this spherical display system is of strong interest.

If content for the sphere is being developed, it should be in the form of Earth system science modules that contain story-based content for display on any spherical display system and accompanying materials, technologies, or programs that extend the visitor experience beyond viewing the content on the sphere. Topics of priority interest to NOAA include, but are not limited to climate, climate change and variability, the impacts of climate change, any topic related to the ocean literacy essential principles and large-scale weather phenomena. It is strongly suggested that the modules incorporate NOAA data, visualizations, or imagery.

While content is required to be displayable on SOS, it is strongly preferred that content be designed such that it can be displayed on more than one earth viewing platform\*\*\*. Also of interest is the development of content and content templates that utilize regularly updated data. Developed content will be made publicly available, free of charge, via placement in NOAA's SOS dataset library. The Network has created specific content creation guidelines, available at: [http://www.oesd.noaa.gov/network/content\\_guidelines/](http://www.oesd.noaa.gov/network/content_guidelines/), that should be incorporated into the design of any project that intends to create content for spherical display systems and/or other data visualization projects.

Applicants are strongly encouraged to submit letters of commitment from institutions with public displays of spherical display systems indicating their interest in the topic and format of the earth system science module(s), interactive, or other program being proposed and their willingness to adopt and use the product(s), once created.

*[\*\*\* Earth-viewing platforms include, but are not limited to the following: SOS, Magic Planet, Omniglobe, Immersive cave or dome technologies, or virtual globes such as, Google Earth, NASA's World Wind and Animated Earth.]*

### **c. Sphere-related Professional Development and Training**

To improve the quality of docent-facilitated sphere programs, this funding opportunity seeks projects that include activities focused on professional development and training for docents/interpreters for spherical display systems. Due to the investment NOAA has already made in SOS, professional development that prepares docents for presenting on this spherical display system is of strong interest. Professional development/training activities can include

interpretive techniques, scientific content understanding, and inquiry techniques. Recommendations from the Network relating to docent programs for spheres, as articulated in the report from the most recent Network workshop available at: <http://www.oesd.noaa.gov/network/docents/>, should be reviewed prior to submission.

Professional development/training programs should work to ensure scientific integrity and quality in docent presentations. Special care should be given to creating and integrating mechanisms to eliminate and prevent the introduction of scientific inaccuracies and misinterpretations from these presentations. Partnerships with science institutions that will be able to provide scientific knowledge and expertise to inform the development of training programs are strongly encouraged for these projects.

Professional development/training projects that involve docents from multiple institutions that display spherical display systems are preferable. If a project is focused on docents/interpreters from a single institution, the project should aim to create a model that is broadly distributed or transferred to other institutions during the project period.

Projects can also involve the development of material and technologies that aid docents in presenting programming on spherical display systems.

#### **d. Installations of Spherical Display Systems**

Support is available for the installation of spherical display system(s) in public exhibits in informal/nonformal science education venues such as science centers, museums, and aquariums. These spherical display system(s) should be used to display ocean, coastal, Great Lakes, weather and climate science content and are expected to be major components or centerpieces of exhibits related to Earth system sciences. It is strongly suggested that exhibits incorporate the use of NOAA data.

Applicants are sought that can demonstrate previous success in incorporating this type of technology into public exhibits and/or demonstrate sufficient technical capability to support this technology; have large visitorship or serve underserved communities; have well-developed partnerships with formal education institutions or community organizations; and can leverage existing funding. It is expected that successful applicants will evaluate the effectiveness of the installed spherical display systems as Earth system science learning tools. See Section I.A.3 Project Evaluation plus the specialized information for spherical display system project evaluation in I.A.4 .e below.

Applicants should have a facility prepared to begin a public exhibit involving the spherical display system(s) between mid 2009 and early 2011. For Science On a Sphere, installations should be expected to occur approximately four to six months after the selected start date. If applicants do not have a facility prepared to receive an installation within these

stated timeframes, then an application should be submitted to a future funding opportunity. Future funding opportunities will be posted at: [http://www.oesd.noaa.gov/funding\\_opps.html](http://www.oesd.noaa.gov/funding_opps.html) as well as in Grants.gov. Once installation has occurred, the spherical display system(s) may remain on public display indefinitely until the institution chooses to dismantle the exhibit or NOAA requests the system to be returned. However, it is required that the display continue to be used in the manner described in the initial grant proposal. Spherical display systems funded through this funding opportunity must be on display in a public exhibit venue for the majority of the award period. If the display will be removed from public exhibit for more than a two-week period during the award period, prior approval from NOAA must be obtained with the exception of display systems that are integrated into traveling exhibits.

Funding can be requested (and should be detailed in the budget section) to cover the following aspects of spherical display systems installation: (1) required hardware, (2) required software, (3) technical support for the installation of the system, (4) staff training, (5) costs associated with necessary site preparation such as room setup, facilities setup, labor charges, personnel salary, exhibit design and fabrication, (6) integration of the display system into existing educational programming, (7) program evaluation, (8) necessary travel, and (9) indirect costs.

#### **(i) Installations of NOAA's Science On a Sphere**

If funding is being requested for NOAA's Science On a Sphere (SOS), applicants should explicitly state this in their project description. See <http://sos.noaa.gov/about/> for information on SOS. Because Science On a Sphere is NOAA created and owned, the installation procedure differs from that of other, commercial products. Cooperative agreements will be used as the funding instrument for SOS installations because the installation project requires substantial involvement of and coordination with NOAA personnel. The cooperators/awardees will provide a suitable informal/nonformal education venue for SOS and display NOAA data products on the system and include prominent attribution to NOAA within the exhibit. NOAA will provide the technical support associated with the installation and training on use of existing content, and system software.

**Note:** SOS has specific site requirements. See <http://sos.noaa.gov/docs/requirements.html> to ensure your facility can meet these requirements. Furthermore, you must have your floorplan, including detailed dimensions, and technical exhibition design approved by a member of NOAA's SOS team prior to submission of an application (an email from a member of the SOS team is sufficient). Applicants must also have the SOS Team provide a quote for their services required for SOS installation, which include the following: operating software, technical support for the installation of the system, and staff training. Installations of SOS should be expected to occur approximately four to six months after the selected project start date. This information needs to be included

and budgeted for in your application. Please contact Bill Bendel, Manager of the SOS team, to begin discussions, [william.b.bendel@noaa.gov](mailto:william.b.bendel@noaa.gov) or 303-497-6708.

Applicants will also need to request funding to support the purchase of required, commercially available SOS hardware. Funding must be used to purchase all required hardware unless the applicant demonstrates alternative acquisition mechanisms or current possession of required hardware. This detail should be included in the budget section. A list of the required and optional equipment that constitutes an SOS system is available at <http://sos.noaa.gov/equipment/>. The required and optional equipment for a standard fully functional SOS system totals approximately \$60,000. SOS Team personnel are available for consultation on the required and optional hardware list.

#### **e. Advanced Evaluation Efforts**

Members of the Network have performed several foundational studies of educational use of spheres. Projects that incorporate the findings of these evaluations and can advance the state of knowledge of educational use of spheres are sought. Evaluations of sphere content, programming, professional development/training, or sphere interactives are of interest. Evaluation efforts can be focused on one institution or involve multiple institutions. Key issues posed by the SOS Network, as articulated in the report from the most recent Network workshop available at: [http://www.oesd.noaa.gov/network/Workshop\\_rpt\\_2009/](http://www.oesd.noaa.gov/network/Workshop_rpt_2009/), should be reviewed prior to submission. Applicants should review the evaluation reports pertaining to spherical display systems have been shared by the Network available at: [http://www.oesd.noaa.gov/network/SOS\\_evals/](http://www.oesd.noaa.gov/network/SOS_evals/).

#### **5. Award Dates and Mission Goal:**

It is anticipated that awards under this announcement will be made by September 30, 2010 and that projects funded under this announcement will have a start date no earlier than October 1, 2010. This FFO meets NOAA's Mission Support goal to provide critical support for NOAA's Mission ([http://www.ppi.noaa.gov/PPI\\_Capabilities/Documents/Strategic\\_Plans/FY09-14\\_NOAA\\_Strategic\\_Plan.pdf](http://www.ppi.noaa.gov/PPI_Capabilities/Documents/Strategic_Plans/FY09-14_NOAA_Strategic_Plan.pdf)).

#### **6. References Cited:**

Bell, P, Lewenstein, B, Shouse, A.W., Feder, M.A. (eds), 2009. Learning Science in Informal Environments: People, Places, and Pursuits. Committee on Learning Science in Informal Environments, A REPORT OF THE NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES, The National Academies Press, Washington, D.C.

## **B. Program Priorities**

This program has two priorities. Priority 1 is for large-scale projects, i.e., projects with regional to national scale implementation. Priority 1 projects should involve geographically distributed organizations/institutions or networks of organizations/institutions that support the proposed activities or results in a product or model that is broadly distributed or transferred to other institutions/organizations during the project period. Priority 2 is for small-scale projects that occur over a shorter duration with local to regional implementation. Priority 2 may include proof-of-concept projects and installations of spherical display systems with minimal or no accompanying educational programming.

## **C. Program Authority**

Authority for this program is provided by the following 33 USC 893a(a).

## **II. Award Information**

### **A. Funding Availability**

NOAA anticipates the availability of approximately \$7,500,000 of total Federal financial assistance in FY2010 and FY2011 anticipated for Environmental Literacy Grants for informal/nonformal science education. Approximately 5 to 10 awards in the form of grants or cooperative agreements will be made.

For Priority 1, the total Federal amount that may be requested from NOAA shall not exceed \$1,250,000 for all years including direct and indirect costs. The minimum Federal amount that must be requested from NOAA for all years for the direct and indirect costs for this priority is \$500,001. Applications requesting Federal support from NOAA of more than \$1,250,000 or less than \$500,001 total for all years will not be considered for funding.

For Priority 2, the total Federal amount that may be requested from NOAA shall not exceed \$500,000 for all years including direct and indirect costs. The minimum Federal amount that must be requested from NOAA for all years for the direct and indirect costs for this priority is \$200,000. Applications requesting Federal support from NOAA of less than \$200,000 or more than \$500,000 total for all years will not be considered for funding.

The amount of funding available through this announcement will be dependent upon final FY10 and FY11 appropriations. Publication of this notice does not oblige DOC/NOAA to award any specific project or to obligate any available funds. It is likely that there will be no additional funding opportunity issued for these types of projects in FY11.

If an applicant incurs any costs prior to receiving an award agreement from an authorized NOAA Grants Officer, the applicant would do so solely at one's own risk of such costs not being included under the award. The exact amount of funds that may be awarded will be determined in pre-award negotiations between the applicant and NOAA representatives.

## **B. Project/Award Period**

Applications to priority 1 (large-scale projects) must cover a project period of two to five years to be eligible for merit review. Applications to priority 2 (small-scale projects) must cover a project period of one to three years to be eligible for merit review. Start dates can be as early as October 1, 2010. Applications must include a project description and a budget for the entire award period. Applicants selected to receive funding may be asked to modify the project start date.

## **C. Type of Funding Instrument**

Applications selected for funding will be funded through a grant or cooperative agreement under the terms of this notice. Applications funded through cooperative agreements will include substantial involvement of the Federal government which may include, but is not limited to, liaison activities between the grantee and NOAA personnel who are contributing data or expertise to the project.

# **III. Eligibility Information**

## **A. Eligible Applicants**

Eligible applicants are institutions of higher education, other nonprofits, and state, local and Indian tribal governments in the United States. For-profit organizations, K-12 public and independent schools and school systems, foreign institutions, foreign organizations and foreign government agencies are not eligible to apply. For-profit and foreign organizations can be project partners. Federal agencies are not eligible to receive Federal assistance under this announcement, but may be project partners.

The Department of Commerce/National Oceanic and Atmospheric Administration (DOC/NOAA) is strongly committed to increasing the participation of Minority Serving Institutions (MSIs), i.e., Historically Black Colleges and Universities, Hispanic-serving institutions, Tribal colleges and universities, Alaskan Native and Native Hawaiian institutions, and institutions that work in underserved communities. Applications are encouraged that involve any of the above types of institutions.



An individual may apply only once as principal investigator (PI) through this funding opportunity. However institutions may submit more than one application and individuals may serve as co-PIs or key personnel on more than one application.

## **B. Cost Sharing or Matching Requirement**

There is no cost share requirement.

## **C. Other Criteria that Affect Eligibility**

Applications with budgets in which the total Federal share requested from NOAA for all years of the project is more than \$1,250,000 or less than \$200,000 for the direct and indirect costs of the proposed project will not be considered for merit review.

Letters of intent are required and must be submitted on time. Applications that have not been preceded by the submission of an on-time letter of intent will not be merit reviewed.

Applications that are lacking any of the required elements of the application or do not follow the form prescribed in IV.B will not be merit reviewed.

Applications received after the deadline will not be merit reviewed. See additional details in Section IV. C.

## **IV. Application and Submission Information**

### **A. Address to Request Application Package**

The application package is available through Grants.gov (<http://www.grants.gov>). If an applicant does not have Internet access, please contact one of the Program Officers, Carrie McDougall, Sarah Schoedinger, or John McLaughlin, for information on how to submit a letter of intent and an application. See Section VII. Agency Contacts for the Program Officers' contact information.

Grants.gov requires applicants to register with the system prior to submitting an application. This registration process can take several weeks and involves multiple steps. In order to allow sufficient time for this process, you should register as soon as you decide you intend to apply, even if you are not yet ready to submit your application. If submitting a collaborative project (see section B.1. below) each submitting institution has to be registered in Grants.gov. If an applicant has problems downloading the application forms from Grants.gov, contact Grants.gov Customer Support at 1-800-518-4726 or [support@grants.gov](mailto:support@grants.gov).

### **B. Content and Form of Application**

This document requests letters of intent and full applications. The provisions for application preparation are mandatory. Failure to comply with the stated form and content requirements will result in the application not being merit reviewed. See the Office of Education's frequently asked questions site: [http://www.oesd.noaa.gov/elg/elg\\_faqs.html](http://www.oesd.noaa.gov/elg/elg_faqs.html).

## **1. FORM:**

The page margin on standard letter-size paper must be one inch (2.5 cm) at the top, bottom, left, and right. All pages should be numbered. The typeface must be standard 11-point size or larger and must be clear and easily legible. Color or high-resolution graphics, unusually sized materials, or otherwise unusual materials submitted as part of the application are allowed, but should be employed only when necessary for adequate description of the proposed project. All narrative sections of the application should be single spaced and consist of the sections described in Section IV.B.2. Failure to comply with the required form and within the prescribed page limits will result in the application not being reviewed.

Applicants may submit an application wherein the applicant is the lead institution and project partners are funded through sub-awards, and/or a collaborative application, where no single institution is the lead and each project partner submits an application on behalf of their institution.

For collaborative projects in which there is no single lead institution and funding will be provided directly by NOAA to each collaborative partner, each collaborating partner should submit a separate application. Each application that is part of a collaborative submission should use the same project description and supporting documentation (milestones, references cited, etc.) with exception of the Standard Forms and budget details, which are specific to each applicant. For collaborative projects, please use the collaborative title page template from this URL: [http://www.oesd.noaa.gov/elg/funding\\_templates.html](http://www.oesd.noaa.gov/elg/funding_templates.html). Note: all applicants must meet the eligibility requirements (see Section III) and the budget limits are the same regardless of whether a single application or a collaborative application is submitted. Collaborative submissions will be reviewed as one single project.

## **2. CONTENT:**

### **Required Elements for Letters of Intent:**

Letters of intent are required for all applications and should briefly summarize the proposed project, identify the project's partners, explain how the project will address NOAA's education goals and the goal of this funding opportunity, and provide an estimate of the budget request. Letters of intent should not exceed three (3) pages of standard letter-size paper. Please see [http://www.oesd.noaa.gov/elg/funding\\_templates.html](http://www.oesd.noaa.gov/elg/funding_templates.html) for additional guidance and template. Failure to submit a letter of intent by the deadline will result in

applicants being ineligible to submit full applications for this funding opportunity.

**Required Elements for Applications:**

Applications must include the elements (a) through (i) below; element (j) is optional. Failure to provide this information in the required form and within prescribed page limits will result in the application being excluded from further review.

**(a) Required Forms.** At the time of application submission, all applicants anticipating direct funding shall submit the following forms with signatures of the authorized representative of the submitting institution. (Note: submission through Grants.gov results in automatic electronic signatures on these forms.):

(i) SF-424, Application for Federal Assistance

(ii) SF-424-A, Budget Information, Non-Construction Programs

(iii) SF-424-B, Assurances, Non-Construction Programs

(iv) CD-511, Certifications Regarding Lobbying

(v) SF-LLL, Disclosure of Lobbying Activities (if applicable, see instructions on form)

Only the versions of these forms available in Grants.gov are acceptable.

**(b) Title Page.** The title page identifies the funding opportunity to which you are applying, the project's title, the Principal Investigator's (PI) and co-PI's names, affiliations, complete mailing addresses, email addresses, telephone numbers and fax numbers. There should be an executive summary of the project that does not exceed 150 words. The proposed start and end dates for the project and requested budget must also be included on the title page. For collaborative projects, please use the collaborative title page template. Title page templates are available at [http://www.oesd.noaa.gov/elg/funding\\_templates.html](http://www.oesd.noaa.gov/elg/funding_templates.html).

**(c) One-page Abstract.** Describe the essential elements of the proposed project. Include: (1) the Project Title; and (2) a concise statement of the objectives of the project, description of the project activities, the location of the project, the expected outcome(s) and the rationale for the work proposed. The abstract is used to help compare applications quickly and allows the respondents to summarize these key points in their own words. Project summaries of applications that receive funding may be posted on program-related websites. The abstract should appear on a separate page, and not exceed one page in length.

**(d) 15-page Project Description.** The project description section must not exceed 15 pages and must follow the requirements in IV.B, Content and Form of Application. Page limits are inclusive of figures and other visual materials, but exclusive of references, budget

information, resumes, milestone charts, proposed work plans, and letters of commitment. Each page of the project description should include page numbers and the PI's name in the header or footer. A template for the project description can be found online at [http://www.oesd.noaa.gov/elg/funding\\_templates.html](http://www.oesd.noaa.gov/elg/funding_templates.html).

The proposed project must be described completely. The project description should clearly describe the project's goals, implementation and management. It should provide a full justification for the project. This section should also include:

(i) The objective(s), expected outcomes, and an explanation for how the activities and expected outcomes support the objective of this funding program and the outcomes of the NOAA Education Strategic Plan referred to in section I.A;

(ii) Description of the proposed activities. This should include a description of all products that will be created or activities that will be undertaken and a justification for the need of those products or activities, as well as a description of the process that will be used to create and evaluate all products. Descriptions should include the key messages associated with any planned exhibitions or program content and best practices that will be employed. Applications must clearly demonstrate how the proposed project builds upon prior practice and related work and cite appropriate literature references that support the proposed approach;

(iii) For projects involving spherical display systems or data visualization programs, include descriptions of how the display system or data visualization will be incorporated into public exhibitions, how visitor interaction with the system or visualization will occur (i.e., if facilitators will be used to explain content, if a kiosk will allow users to interact with the system, or if automated narrated play sequences will run). Please also describe the platforms on which the content can be viewed, novel ways the content is made to be more engaging, how the method of content presentation is appropriate given the target audience, presentation style, and the learning objectives. Please refer to Section I.A.4 for additional guidance on projects involving spherical display systems and data visualizations.

(iv) A discussion of how the proposed project reflects or addresses the Climate Literacy and/or Ocean Literacy and/or Essential Principles and Fundamental Concepts if applicable;

(v) A discussion of the project's target audience(s) that specifically identifies whether the audience(s) is (are) public, professional, or both;

(vi) A discussion of the institution's capability to complete the proposed activities;

(vii) A description of how the project will incorporate NOAA mission goals and data and data products (e.g. images) into the project activities;

(viii) A description of how the project activities will be evaluated for their effectiveness in meeting stated project goals and objectives as well as the goal of this program to engage the public in educational activities that utilize emerging and/or advanced technologies and leverage NOAA assets to improve understanding and stewardship of the local and global environment as well as a description of who will be carrying out the evaluation. See Section I.A for guidance on evaluation;

(ix) A description of the project partners' roles and the coordination among project partners; specifically, highlight any partnerships involving NOAA assets ([http://www.oesd.noaa.gov/elg/NOAA\\_assets.html](http://www.oesd.noaa.gov/elg/NOAA_assets.html)). (**NOTE:** letters of commitment articulating partners' roles should be submitted as a separate section of the application.);

(x) A description of the capabilities of the personnel that will be involved in the project; and

(xi) A description of how project results will be disseminated beyond the audience immediately involved in the activities of the project. Specifically, PIs should consider presenting evaluation results and project impacts at the annual meetings of relevant professional organizations such as AZA, ASTC, NAAEE, NMEA, etc., posting evaluation reports to [www.informalscience.org](http://www.informalscience.org) and including any resulting instructional products and materials in the NSDL's Science and Math Informal Learning Educators (SMILE) Pathway ([www.howtosmile.org](http://www.howtosmile.org)).

**(e) References Cited.** Reference information is required. Each reference must include the names of all authors in the same sequence in which they appear in the publication, the article title, publication or publication title, volume number, page numbers, and year of publication. While there is no established page limit, this section should include bibliographic citations only and should not be used to provide parenthetical information outside the 15-page project description. If there are no references to cite, this must be clearly indicated under a heading "References Cited".

**(f) Proposed Work Plan and Milestone Chart.** Describe the involvement of your institution and partners including deliverables. Provide timelines of major tasks and potential outcomes covering the duration of the proposed project, including project evaluation. The tasks should relate to the both the budget and the intended deliverables or milestones. There is no page limit for this element.

**(g) Budget.** All applications must include a budget section that contains both a table and a narrative, as well as the required official budget form (SF-424A). Both the table and the narrative should use the same categories as shown on the SF-424A form.

The Budget Section should provide enough detail to allow OEd staff and the review panel to evaluate the level of effort proposed by investigators and staff on a specific project.

When appropriate, the narrative and table must provide details on: personnel salaries and fringe benefits (broken out by percent time and number of months devoted to the project for each individual to be paid by the project); travel including per person and per trip costs for transportation, lodging and meals; equipment; supplies; contractual costs, such as anticipated sub-awards; and other costs, including printing, publications, evaluations, and communication costs. For projects with durations of three to five years, funding should also be requested to provide for the PI(s) to attend a PI conference once during the life of the award or, for spherical display awards, plan to attend one or more SOS Network meetings (assume a 3-day conference in Washington, DC). Funding should also be requested to provide for the PI(s) to attend one or more conferences in which project and evaluation results will be presented. Appropriate conferences include the annual meetings of AGU, AMS, AZA, ASTC, NAAEE, NMEA, etc.

If appropriate, also include in the budget narrative, a description of any in-kind resources or equipment that will be provided as well as a description of any other funding that is being sought or has been obtained that could be leveraged to complement this project.

If sub-contracts or sub-awards will be made to project partners or others, the same amount of budget detail provided for the lead institution's activities should be provided for all partners and any planned subcontracts associated with the grant. See [http://www.oesd.noaa.gov/elg/funding\\_templates.html](http://www.oesd.noaa.gov/elg/funding_templates.html) for a budget narrative template and model and a budget table model. Documentation regarding indirect-cost-rate agreements must also be included. For additional guidance on providing adequate budget justifications, visit [http://www.oesd.noaa.gov/elg/funding\\_templates.html](http://www.oesd.noaa.gov/elg/funding_templates.html) and click on "NOAA Standard Budget Guidelines".

Although a range of budgets for the project evaluations will be accepted, it is not unreasonable for 10-20% of the budget to be allotted to a comprehensive evaluation of the project.

For projects involving installation of Science On a Sphere (SOS), the budget narrative and table should include the details provided in the list of required and optional SOS hardware supplies and equipment and their associated costs or a reduced list of required hardware with an explanation as to how the other required equipment will be supplied. See <http://sos.noaa.gov/equipment/> for hardware list. Applicants should modify this hardware list to reflect those items required for their site's installation needs and use this as the basis of the budget request. If the applicant is able to offset the retail costs of the required hardware due to existing agreements with certain vendors or because the hardware is already owned by the applicant or will be secured by another means, then that should be clearly stated.

There is no page limit for this element (g) Budget.

**(h) Brief Resumes.** All principal investigators, co-principal investigators, and/or key personnel of project partners must provide summaries of no more than 3 pages per person that include a list of professional and academic credentials and contact information (mailing address, email address, phone, fax). Failure to provide this information in the required format and within the prescribed page limits will result in the application not being reviewed.

**(i) Current and Pending Support.** Describe all current and pending Federal and non-Federal funding for all principal investigators (PIs) and co-PIs. The capability of the applicants (PIs and co-PIs) and their collaborators to complete the proposed work in light of present commitments to other projects must be assessable. Therefore, please list the percentage of time the applicant and collaborators have committed to other Federal or non-Federal projects, as compared to the time that will be committed to the project solicited under this notice. If the applicants have no current or pending funding beyond this application, this must be clearly indicated under a heading "Current and Pending Support". A template for summarizing Current and Pending Support can be found online at [http://www.oesd.noaa.gov/elg/funding\\_templates.html](http://www.oesd.noaa.gov/elg/funding_templates.html).

**(j) Letters of commitment or other supplemental materials.** If substantive partnerships are described in the project description, letters of commitment should be provided. Letters of commitment are important for demonstrating the commitment of project partners. Letters of commitment should be submitted as separate attachments in Grants.gov, or if after deadline emailed to the Program Officer. Any other supplemental material should also be submitted as separate attachments in Grants.gov. For projects involving spherical display system programming, applicants are strongly encouraged to submit letters of commitment from institutions with public displays of spherical display systems indicating their interest in the topic and format of the earth system science module(s), interactive, or other program being proposed and their willingness to adopt and use the product(s), once created.

**(k) NEPA Questionnaire.** The Office of Education has determined that applicants do not need to provide answers to the NOAA NEPA Questionnaire at this time.

### **C. Submission Dates and Times**

An informational teleconference with the program officers will occur on January 21st 2010 (time TBD). Interested applicants should register by contacting [oad.grants@noaa.gov](mailto:oad.grants@noaa.gov) and include in the Subject line of the email: "Interested in FFO Teleconference - Need Details" and provide the interested parties name, institution and telephone number in the body of the email. Whenever possible people from the same institution should try to call in through the same phone line.

Letters of Intent are required for all applications and must be received by 5:00 p.m., EST,

February 16, 2010. The deadline for full applications is 5:00 p.m., EDT on April 6, 2010. Letters of Intent should be submitted by email to [oad.grants@noaa.gov](mailto:oad.grants@noaa.gov) and are time and date stamped by the sender's server. The submitter will receive a response by email from the program office acknowledging receipt of the letter of intent. If you do not receive this response within 72 hours of the deadline, then call Stacey Rudolph: 202-482-3739 to confirm that your letter of intent has been received.

Applications must be received by 5:00 PM, EDT on April 6, 2010. Hard copy applications may be accepted after the deadline if the application was provided to an expedited delivery service on or before 5:00 PM EDT on April 6, 2010, if the applicant has proof of this, and if the application is received within two days following the deadline by the Office of Education.

Late applications will not be merit reviewed.

Applications submitted through Grants.gov APPLY are automatically stamped with the date and time of submission and will be the basis of determining timeliness. For applications submitted through Grants.gov, there will be two automated email receipts sent to the application submitter with the date and time of submission (the first email confirms receipt, the second email confirms that there are no errors with your application submission and it has been forwarded to NOAA for further processing). If both email confirmation receipts are not provided within two (2) days of application submission, contact the Grants.gov Help Desk and [oad.grants@noaa.gov](mailto:oad.grants@noaa.gov). **PLEASE NOTE:** It may take Grants.gov up to two (2) business days to validate or reject the application. Please keep this in mind in developing your submission timeline. Applicants are responsible for ensuring that all required elements have been appropriately submitted. Additional instructions for Grants.gov can be found at [http://www.oesd.noaa.gov/elg/elg\\_faqs.html](http://www.oesd.noaa.gov/elg/elg_faqs.html).

Hard copy applications will be hand stamped with time and date when received in the Office of Education. (Note that late-arriving hard copy applications provided to a delivery service on or before 5 p.m., EDT April 6, 2010 will be accepted for review if the applicant can document that the application was provided to the guaranteed delivery service by the specified closing date and time, and if the applications are received in the Office of Education no later than 5 p.m. EST 2 business days following the closing date.) **Please note:** hard copy applications submitted via the US Postal Service can take up to 4 weeks to reach this office; therefore applicants are advised to send hard copy applications via expedited shipping methods (e.g., Airborne Express, DHL, Fed Ex, UPS).

Within 24 hours after the deadline you must send an email to [oad.grants@noaa.gov](mailto:oad.grants@noaa.gov) indicating that you have submitted a hard copy application. The submitter will receive a response by email from the program office acknowledging receipt of the email with an update on the receipt of the application. If you do not receive this response within 72 hours of



the deadline, then call Stacey Rudolph: 202-482-3739 to confirm that your application has been received.

You must also retain official proof of shipment of your hard copy application with the time and date that the shipping agent received the package.

See Section F (below) for additional guidance.

#### **D. Intergovernmental Review**

Applications submitted to this funding opportunity are not subject to Executive Order 12372, Intergovernmental Review of Federal Programs.

#### **E. Funding Restrictions**

There are no funding restrictions.

#### **F. Other Submission Requirements**

Please refer to important information in Submission Dates and Times above to help ensure your letter of intent and application are received on time.

##### **Additional information about Grants.gov submissions:**

Because first-time registration with Grants.gov can take up to three weeks, it is strongly recommended that this registration process be completed as soon as possible. Also, even if an applicant has registered with Grants.gov previously, the applicant's password may have expired or their central contractor registration may need to be renewed prior to submitting to Grants.gov. Grants.gov will not accept submissions if the applicant has not been authorized or if credentials are incorrect. Authorizations and credential corrections can take several days to establish. Please plan your time accordingly to avoid late submissions. For further information please visit the Central Contractor Registration website (<http://www.ccr.gov/>).

The Grants.gov validation process for a submitted application can take up to 48 hours to complete (following submission through Grants.gov). Only "validated" applications are sent to NOAA for review. To ensure successful submission of an application, it is strongly recommended that a final and complete application is submitted 48 hours prior to the submission deadline.

##### **Additional information about hard copy submissions:**

If an applicant does not have Internet access or if Grants.gov has technical issues that

prohibit submission, hard copy applications will be accepted. Hard copy applications must be submitted with completed forms containing the original signature of the submitting institution's authorized representative and an electronic copy of the entire application on CD, including scanned signed forms. If the applicant has completed the entire application in Grants.gov but is unable to submit it via Grants.gov, then this application package should be provided via CD along with printed and signed versions of forms SF-424, SF-424B, and CD-511. The authorized representative should sign and date these forms over the printed signature that will appear in the signature box.

**Address to submit letters of intent:**

Letters of intent must be submitted by email to [oed.grants@noaa.gov](mailto:oed.grants@noaa.gov). If applicant does not have Internet access, a hard copy of the letter will be accepted and should be delivered to: Stacey Rudolph, Dept. of Commerce, NOAA Office of Education, 1401 Constitution Avenue NW, HCHB 6863, Washington, DC 20230; Telephone: 202-482-3739. Please note: hard copy applications submitted via the US Postal Service can take up to 4 weeks to reach this office; therefore applicants are advised to send hard copy applications via expedited shipping methods (e.g., Airborne Express, DHL, Fed Ex, UPS).

**Address to submit applications:**

Applications must be submitted through Grants.gov APPLY (<http://www.grants.gov>). However, if an applicant does not have Internet access or Grants.gov is overwhelmed with traffic, hard copy applications will be accepted and should be delivered to: Stacey Rudolph, Dept. of Commerce, NOAA Office of Education, 1401 Constitution Avenue NW, HCHB 6863, Washington, DC 20230; Telephone: 202-482-3739. Please note: hard copy applications submitted via the US Postal Service can take up to 4 weeks to reach this office; therefore applicants are advised to send hard copy applications via expedited shipping methods (e.g., Airborne Express, DHL, Fed Ex, UPS).

See the Office of Education's frequently asked questions site: [http://www.oesd.noaa.gov/elg/elg\\_faqs.html](http://www.oesd.noaa.gov/elg/elg_faqs.html) for more details.

**V. Application Review Information**

**A. Evaluation Criteria**

(1) Importance and/or relevance and applicability of proposed project to the program goals (30%): This ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA's Federal, regional, or local activities. The application should describe how well the proposed project addresses NOAA's stated objectives and priorities. Reviewers will evaluate:

- How well the project addresses the goals and objectives of this funding program described in section I.A;
- How well the project is aligned with NOAA's Education Strategic Plan (<http://www.education.noaa.gov/plan>);
- The extent to which ocean, coastal, Great Lakes, weather and climate science topics and related data or other assets from NOAA are incorporated into the exhibition or project activities;
- For projects focusing on climate change, the extent to which the project will infuse "Climate Literacy: the Essential Principles of Climate Science" (<http://climate.noaa.gov/climateliteracy>) into the project activities;
- For projects focusing on the ocean as a part of the Earth system, the extent to which the project will infuse the "Ocean Literacy: the Essential Principles of Ocean Sciences" ([http://www.coexploration.org/oceanliteracy/documents/OceanLitConcepts\\_10.11.05.pdf](http://www.coexploration.org/oceanliteracy/documents/OceanLitConcepts_10.11.05.pdf)) into the project activities; and
- The extent to which members of traditionally underrepresented groups in Science, Technology, Engineering, and Math (STEM) fields are involved. A listing of groups traditionally underrepresented in STEM fields can be found in the 2008 NSF Science and Engineering Indicators Report at <http://www.nsf.gov/statistics/seind08/c3/c3s1.htm#c3s116>.

(2) Technical/scientific merit (30%): This assesses whether the approach is technically sound and/or innovative, if the methods are appropriate, and whether there are clear project goals and objectives. Reviewers will evaluate:

- The completeness and adequacy of detail in the project description including clearly stated goals and measurable objectives;
- Whether the project is based upon a needs assessment demonstrating the project activities and/or products to be developed will fill a gap in informal/nonformal education.
- The overall technical feasibility of the project, including whether the proposed approach is educationally and technically sound, is based on best practices, uses appropriate methods and technology(ies) to achieve project outcomes, and is likely to be implemented on the scale described;
- The likelihood of meeting milestones and achieving anticipated results in the time

proposed;

- The appropriateness of the identified target audience(s) and proposed methods to impact the stated audience(s);
- Whether there is a clear delineation of responsibilities of the project's key personnel and whether there are adequate communication mechanisms in place for coordinating among project partners;
- The value and appropriateness of proposed collaborations;
- The extent to which the project leverages other resources or investments (including NOAA assets) to achieve its objectives;
- If the project involves development of a model activity or program, how likely is that model to be adopted by other institutions;
- The likelihood the project can be sustained beyond the duration of the grant;
- The likelihood the impacts of the project on the target audience will be long-lasting; and
- Whether there are appropriate mechanisms to evaluate the success of the project in meeting the anticipated outcomes.

(3) Overall Qualifications of Applicants (15%): This ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project. Reviewers will evaluate:

- The qualifications and demonstrated ability within their areas of expertise of the applicants, of key personnel who would receive funds from this program, and of key personnel of the project partners;
- The applicant's previous experience in managing, designing, and implementing this type of educational programs;
- The evaluators' previous experience in managing, designing and implementing evaluations appropriate for the target audiences and proposed activities;
- The likelihood that the participating institution(s) have the appropriate resources to carry out the proposed activities and that applicant(s) have the ability to complete the proposed project successfully, especially technical capabilities;
- The level of collaboration with other programs, NOAA offices or programs, or other educational or research institutions; and

- The extent to which all partners are contributing meaningfully to the project, including articulation of activities in letters of commitment.

(4) Project Costs (15%): The budget is evaluated to determine if it is realistic and commensurate with the project needs and time-frame. Reviewers will evaluate:

- The adequacy of the proposed resources to accomplish the proposed work within the indicated time-frame;
- Whether the budget is adequate for the scope of the evaluation planned;
- If there are additional funds that provide additional leverage; and
- The adequacy of detail in the budget narrative to allow an informed determination of how well all costs associated with the project are justified.

(5) Outreach and Education (10%): This criterion ascertains whether this project provides a focused and effective education and outreach strategy regarding NOAA's mission to protect the Nation's natural resources. Reviewers will evaluate:

- How the outcomes and results of the proposed project will be disseminated to audiences beyond those participating directly in the project. These may include publications, conferences, community events, media, etc. associated with professional organizations such as AGU, AMS, AZA, ASTC, NAAEE, NMEA and the SOS Users Collaborative Network;
- The likelihood that the project will increase awareness and use of NOAA resources among target audiences.

## **B. Review and Selection Process**

Upon receipt of a completed application by NOAA, an initial administrative review is conducted to determine compliance with requirements and completeness of the application. Minimum requirements, among other elements, include all of the following:

- Applicant is eligible to apply;
- Letter of intent was received on time;
- Application was received on time;
- All required elements of the application are present and follow format guidance;
- Requested budget is no less than \$200,000 and no more than \$1,250,000 for all

years of the project; and

- Project duration is 1 to 5 years.

Letters of Intent will be reviewed by the Program office to provide feedback about the project. Any feedback will be sent to the party submitting the letter of intent by March 5, 2010. This notification will be sent via an email from [oed.grants@noaa.gov](mailto:oed.grants@noaa.gov). If you do not hear from the Program office by March 5, 2010, you may assume that you can proceed with preparing an application.

All applications that meet the eligibility and minimum requirements and that are ascertained to be complete will be evaluated and scored by a panel of independent reviewers. The reviews will be conducted by panel review. Reviewers may be Federal or non-Federal experts, each having expertise in a separate area so that the reviewers as a whole cover the spectrum of applications received. The reviewers will score each application using the evaluation criteria and relative weights provided above. The individual review ratings shall be averaged for each application to establish rank order. No consensus advice will be given by the review panel. The Program Officer will neither vote nor score applications as part of the review process. The Program Officer will make his/her recommendations for funding based on rank order and the selection factors listed in the next paragraph to the Selecting Official, the Director of NOAA Education, for the selection of applications.

### **C. Selection Factors**

The panel review ratings shall provide a rank order to the Selecting Official for final recommendation to the NOAA Grants Officer. The Selecting Official will select applications in the rank order established by each panel unless an application is justified to be selected out of rank order based upon one or more of the following factors:

1. Availability of funding;
2. Balance/distribution of funds:
  - a. Geographically
  - b. By type of institutions
  - c. By type of partners
  - d. By research areas
  - e. By project types
3. Whether this project duplicates other projects funded or considered for funding by

NOAA or other Federal agencies;

4. Program priorities and policy factors;

5. Applicant's prior award performance;

6. Partnerships and/or participation of targeted groups;

7. Adequacy of information necessary for NOAA staff to make a NEPA determination and draft necessary documentation before recommendations for funding are made to the Grants Officer.

Selected applicants may be asked to modify objectives, project plans, time lines, or budgets, and provide supplemental information required by the agency prior to the award. When a decision has been made (whether an award or declination), anonymous copies of reviews and summaries of review panel deliberations, if any, will be made available to the applicant.

#### **D. Anticipated Announcement and Award Dates**

Review of applications will occur during April through June 2010. Awards will be made by September 30, 2010. Start dates should be no earlier than October 1, 2010.

### **VI. Award Administration Information**

#### **A. Award Notices**

Successful applicants will receive notification (either hard copy or electronically) from OEd that the application has been recommended for funding to the NOAA Grants Management Division by September 1, 2010. This notification is not an authorization to begin performance of the project. Official notification of funding, authorized by a NOAA Grants Officer, is the authorizing document that allows the project to begin. Notifications will be made by e-mail from Grants Online to the Authorized Representative of the project.

Unsuccessful applicants will be notified that their reviewed application was not recommended for funding (declined) or was not reviewed because it did not meet the minimum requirements prescribed in Sections IV.B and IV.C by September 1, 2010.

#### **B. Administrative and National Policy Requirements**

The recipients must comply with Executive Order 12906 regarding any and all geospatial data collected or produced under grants or cooperative agreements. This includes documenting all geospatial data in accordance with the Federal Geographic Data Committee

Content Standard for digital geospatial data. The Program uses only the existing NOAA Federal financial assistance awards package requirements per 15 CFR parts 14 and 24.

#### National Environmental Policy Act (NEPA)

NOAA must analyze the potential environmental impacts, as required by the National Environmental Policy Act (NEPA), for applicant projects or applications which are seeking NOAA Federal funding opportunities. Detailed information on NOAA compliance with NEPA can be found at the following NOAA NEPA website: <http://www.nepa.noaa.gov/>, including our NOAA Administrative Order 216-6 for NEPA, [http://www.nepa.noaa.gov/NAO216\\_6.pdf](http://www.nepa.noaa.gov/NAO216_6.pdf), and the Council on Environmental Quality implementation regulations, [http://ceq.eh.doe.gov/nepa/regs/ceq/toc\\_ceq.htm](http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm). Consequently, as part of an applicant's package, and under their description of their program activities, applicants are required to provide detailed information on the activities to be conducted, locations, sites, species and habitat to be affected, possible construction activities, and any environmental concerns that may exist (e.g., the use and disposal of hazardous or toxic chemicals, introduction of non-indigenous species, impacts to endangered and threatened species, aquaculture projects, and impacts to coral reef systems). In addition to providing specific information that will serve as the basis for any required impact analyses, applicants may also be requested to assist NOAA in drafting of an environmental assessment, if NOAA determines an assessment is required. Applicants will also be required to cooperate with NOAA in identifying feasible measures to reduce or avoid any identified adverse environmental impacts of their application. The failure to do so shall be grounds for not selecting an application. In some cases if additional information is required after an application is selected, funds can be withheld by the Grants Officer under a special award condition requiring the recipient to submit additional environmental compliance information sufficient to enable NOAA to make an assessment on any impacts that a project may have on the environment.

Prior notice and an opportunity for public comment are not required by the Administrative Procedure Act or any other law for rules concerning public property, loans, grants, benefits, and contracts (5 U.S.C. 553(a)(2)). Because notice and opportunity for comments are not required pursuant to 5 U.S.C. 553 or any other law, the analytical requirements of the Regulatory Flexibility Act (5 U.S.C. 601 et seq.) are inapplicable. Therefore, a regulatory flexibility analysis has not been prepared. It has been determined that this notice does not contain policies with Federalism implications as that term is defined in Executive Order 13132.

Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements: Administrative and national policy requirements for all Department of Commerce awards are contained in the Department of Commerce Pre- Award



Notification Requirements for Grants and Cooperative Agreements contained in the Federal Register notice of February 11, 2008 (73 FR 7696). A copy of the notice may be obtained at <http://www.gpoaccess.gov/fr/search.html>.

#### Limitation of Liability

In no event will NOAA or the Department of Commerce be responsible for application preparation costs if these programs fail to receive funding or are cancelled because of other agency priorities. Publication of this announcement does not obligate NOAA to award any specific project or to obligate any available funds. Recipients and sub-recipients are subject to all Federal laws and agency policies, regulations and procedures applicable to Federal financial assistance awards.

#### Paperwork Reduction Act

This notification involves collection-of-information requirements subject to the Paperwork Reduction Act. The use of Standard Forms 424, 424A, 424B, and SF-LLL and CD-346 has been approved by the Office of Management and Budget (OMB) under control numbers 0348-0043, 0348-0044, 0348-0040 and 0348-0046 and 0605-0001. Notwithstanding any other provision of law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA unless that collection of information displays a currently valid OMB control number.

#### Executive Order 12866

It has been determined that this notice is not significant for purposes of Executive Order 12866.

#### Executive Order 13132 (Federalism)

It has been determined that this notice does not contain policies with Federalism implications as that term is defined in Executive Order 13132.

### **C. Reporting**

Progress reports are due every six months from the start date of the project. Progress reports should be submitted electronically through the NOAA Grants Online system and are due for all award recipients no later than 30 days after each 6-month project period. A final comprehensive report is due no later than 90 days after the expiration date of an award. Progress reports should detail the accomplishments that have occurred during the reporting

period, correspond with the goals and objectives identified in the project narrative and provide specific, project-related information. A suggested template for project reports will be provided to grantees.

Federal Cash Transaction reports, form SF-425, should be submitted electronically through the NOAA Grants Online system and are due semi-annually on October 30th and April 30th for the preceding 6-month period (April 1st to September 30th and October 1st to March 30th) or portion thereof if the project start- or end-date falls in the middle of one of these intervals. Financial reports are due for all award recipients no later than 30 days after each 6-month period. The Final Financial Status report, form SF-425, is a comprehensive financial report that is due no later than 90 days after the expiration date of an award.

## **VII. Agency Contacts**

Please visit the OEd website for further information at [http://www.oesd.noaa.gov/funding\\_opps.html](http://www.oesd.noaa.gov/funding_opps.html) or contact the Program Officers: Carrie McDougall at 202-482-0875; or Sarah Schoedinger at 704-370-3528; or John McLaughlin at 202-482-2893 or by emailing any of them at [oesd.grants@noaa.gov](mailto:oesd.grants@noaa.gov)

Projects involving spherical display systems require consultation with John McLaughlin ([john.mclaughlin@noaa.gov](mailto:john.mclaughlin@noaa.gov), 202-482-2893) or Carrie McDougall ([carrie.mcdougall@noaa.gov](mailto:carrie.mcdougall@noaa.gov), 202-482-0875) prior to submission of the application.

For those applicants without Internet access, hard copies of referenced documents may be requested from NOAA's Office of Education by contacting Stacey Rudolph at 202-482-3739 or sending a letter to: Stacey Rudolph, Dept. of Commerce, NOAA Office of Education, 1401 Constitution Avenue NW, HCHB 6863, Washington, DC 20230; Telephone: 202-482-3739.

## **VIII. Other Information**

None.